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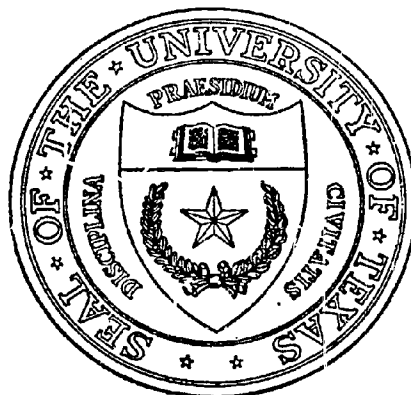
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## ABSTRACT

Described are projected educational programs for children aged 6 and under, with implications for handicapped child education. The author's premise is that all children need to understand themselves and their world in order to understand those similar and dissimilar to them; how different children gain this understanding may differ. Educational programs are said to have three criteria: congruency of learning activity with child's nature, consideration given to best known theories about cognitive development, and content relevancy. The nature of projected educational program is shown to include learning about natural and social sciences, learning the concept of space, which is accompanied by suggestions for a directed teaching situation, development of concepts and language, introduction to the concept of roadside market as economics, which includes suggested teaching methods, progression from meanings to oral language to reading, and mathematics. Discussion of the role of humanities in children's programs includes the value of great literature for children, effective music programs for children, support for sensory motor experiences, and an example study on the wind as a use of poetry for kindergarten students.  
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# EARLY CHILDHOOD EDUCATION FOR HANDICAPPED CHILDREN



**THE DEPARTMENT OF SPECIAL EDUCATION  
THE UNIVERSITY OF TEXAS AT AUSTIN**

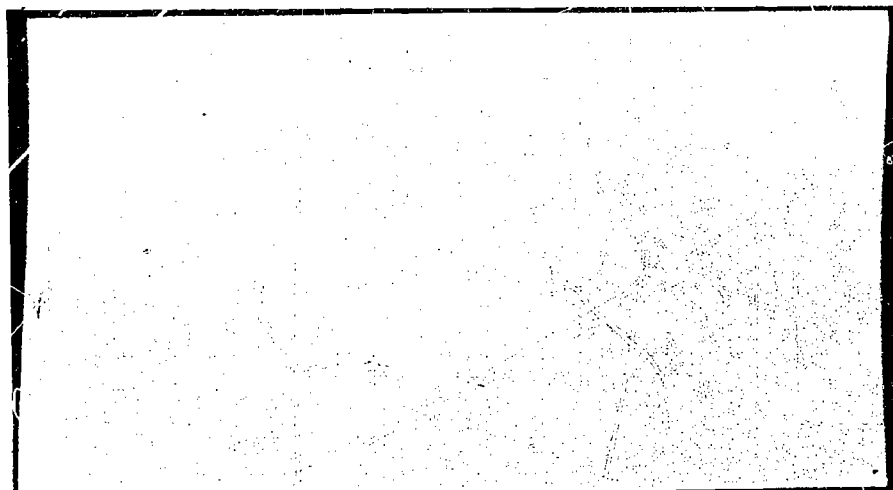
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**P R E S E N T S**

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**EDUCATIONAL PROGRAMS FOR CHILDREN**

**UNDER SIX WITH**

**IMPLICATIONS FOR THE HANDICAPPED**

**BY**

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**. Vol. 1 No. 1**

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EDUCATIONAL PROGRAMS FOR CHILDREN UNDER SIX  
WITH IMPLICATIONS FOR THE HANDICAPPED

INTRODUCTION

In no aspect of American life is the goal of helping each person realize his greatest potential more evident than in the progress made by persons who work in the education of handicapped children. Here, perhaps, a bit of proof of our humanness shines brightly in the midst of other events that seem to focus upon our lack of concern for human needs.

In a short monograph, such as this one, the futility of trying to describe all parts of an educational program for young children is self-evident. Besides, numerous scholars in the field of early childhood have described programs, successful ones that have developed through years of experience and experimentation with children.<sup>1</sup> Therefore, the intent of this paper will be to identify promising ideas that are finding their ways into programs for normal children and to suggest kinds of application that may be made in work with handicapped children. Teachers of all children face the same problem, "How can we match more adequately, the environmental encounters of children with the needs of a developing organism?" Simply, how can we choose learning experiences for children that are right in terms of their developing powers?" Piaget discusses the process as one of assimilation and accommodation--the cognitive striving of an organism to find an equilibrium between himself and his environment.<sup>2</sup>

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<sup>1</sup>These works will be listed in the bibliography.

<sup>2</sup>Maier, Henry W., Three Theories of Child Development. N.Y.: Harper and Row, 1965, p. 86.

The task of successfully matching what is to be taught with the child's powers to grasp its significance challenges the most knowledgeable teachers of normal children; to cope with the multitude of differences in the physical and mental abilities of exceptional children poses a greater challenge. Therefore, the purposes of this monograph can be stated in the problem that faces teachers of all young children, "What should children under six be taught and what are some of the most effective ways of going about it?"

No one questions the effects of the lack of proper physical care upon the growth of children. Numerous medical facilities and the bulk of information about the necessity for providing for physical growth attest to the fact. To allow the very young to live without emotional support from caring persons could result in emotional difficulties. Laymen show concern about this condition. But, when from diverse sources came the idea that a lack of intellectual stimulation in early years could result in cognitive deprivation, it was received with much apprehension. This germ of an idea probably did more to stimulate thinking about better schools for young children than scholars in the field had been able to do in the history of the country! More appalling was an extension of the idea, that is, intellectual deprivation during the early years might never be overcome by the individual despite the effectiveness of his later schooling. Thus, the search is on to find better ways to educate all children under six.

The focus of this monograph is the discussion of promising trends in educational programs for normal learning children under six and implications for those who are handicapped. Immediately the question arises, "How will the educational programs for exceptional children differ from those of others?" The position that will be taken is: first, that all children need to understand themselves and the world in which they are growing up in order to understand others who are like and different from themselves. Secondly, these kinds of understanding will be taught



best by teachers who realize that children need to know many of the same things, but must be taught in terms of their differences. A child born without arms brings a special difference to the learning scene which must be recognized; equally so, the slow learner in a regular classroom poses a unique problem for his teacher. Therefore, the crucial problem for the education of all young children becomes apparent -- What should these children be taught and what are their best ways of learning it? The question will be explored in the following sections.

### THE NATURE OF THE EDUCATIONAL PROGRAMS FOR CHILDREN

The education of handicapped children under six, as well as that of normal children, takes place in many different settings: at home; in public and private schools; in neighborhood community centers; in hospitals; in experimental groups in colleges and universities, and in numerous other places. If these children are to receive more than physical care, or in some cases, more than "institutional care," or treatment that can properly be termed education, what shall be its nature? When examining school programs, the appropriate question might be, "What is there in this program that is superior to the learning a child does on his own at home, on the playground or in the street?" Three criteria may be applied when attempting to answer the question:

1. Do the activities in which children engage appear congruent with their nature?
2. Is there evidence that consideration has been given to the best known theories about how children learn?
3. Is the content relevant when compared with many other kinds of knowledge children might be learning?

In applying the first criterion, we must look for evidence that the program is challenging to children who are self-centered, avid learners for whom wanting to know may be as important as wanting to eat or sleep. The second criterion requires that we look at the provisions that have been made for children to explore ideas on their own, to find out. Are there opportunities for children to touch, see, hear, taste and smell--to push things around and talk as they do so? To apply the third criterion we must ask, "Does the information being gathered by children have long range associative power in that many ideas can be related to it? Can it be expanded when met in new situations through the years?" Lastly, one must ask oneself when viewing all of the kinds of equipment found in a learning center--blocks, toys, child-sized furniture, games, puzzles, pictures, musical instruments, hammers, saws, paint, plants--are all of these things necessary in the learning of young children?

Devotees of today's technology might have us believe that given the proper things, children educate themselves. There is other compelling evidence that must be examined as we continue the search for evidence of sound programs in order to extend our knowledge of how to design them.

Few persons would disagree that in the good learning environment, a young child learns to live well with others, develops a positive image of his own powers, is guided by supportive, loving teachers, and is satisfying his own curiosity. Yet, the presence of these factors in a good place for learning presupposes the existence of substantive content in the program through which the desirable characteristics are nourished. The substantive content must come from all of the fields of human knowledge: social sciences, mathematics, science, humanities, health and physical education. Truly, it may be said that a person's liberal education begins in the nursery school.

Immediately there is a furor from which arises the question, "How can these subjects or disciplines be taught to such young children?" Many scholars have helped us to find a way. Bruner's statement that any idea can be taught in an honest way to children at any age adds challenge to the search. We may begin our explanation by examining the nature of the disciplines. They have come about as men have abstracted ideas from their study about the world in which they live. These ideas have become the core of the disciplines. For example, mathematicians have abstracted the concept of "set;" geographers, "space;" sociologists, "role;" anthropologists, "culture." Numerous examples could be entered to illustrate each discipline. As new knowledge is discovered in any field, old concepts are extended and new ones added. Thus, a way of ordering knowledge comes about, essential to any field of study. But, how are these statements related to programs for children under six?

#### The Natural and Social Sciences

An objective of early education is to induct children into an understanding of themselves and the physical and cultural world in which they live. Observation of a child almost from the moment he is born leads us to believe that the objective falls directly in line with his wishes. During most waking hours, children are busily engaged in trying to discover what living is all about--they look, listen, grasp, taste, smell, push, try to find words to describe the explorations! They have joined those who through their probing, in mature ways, developed the disciplines.

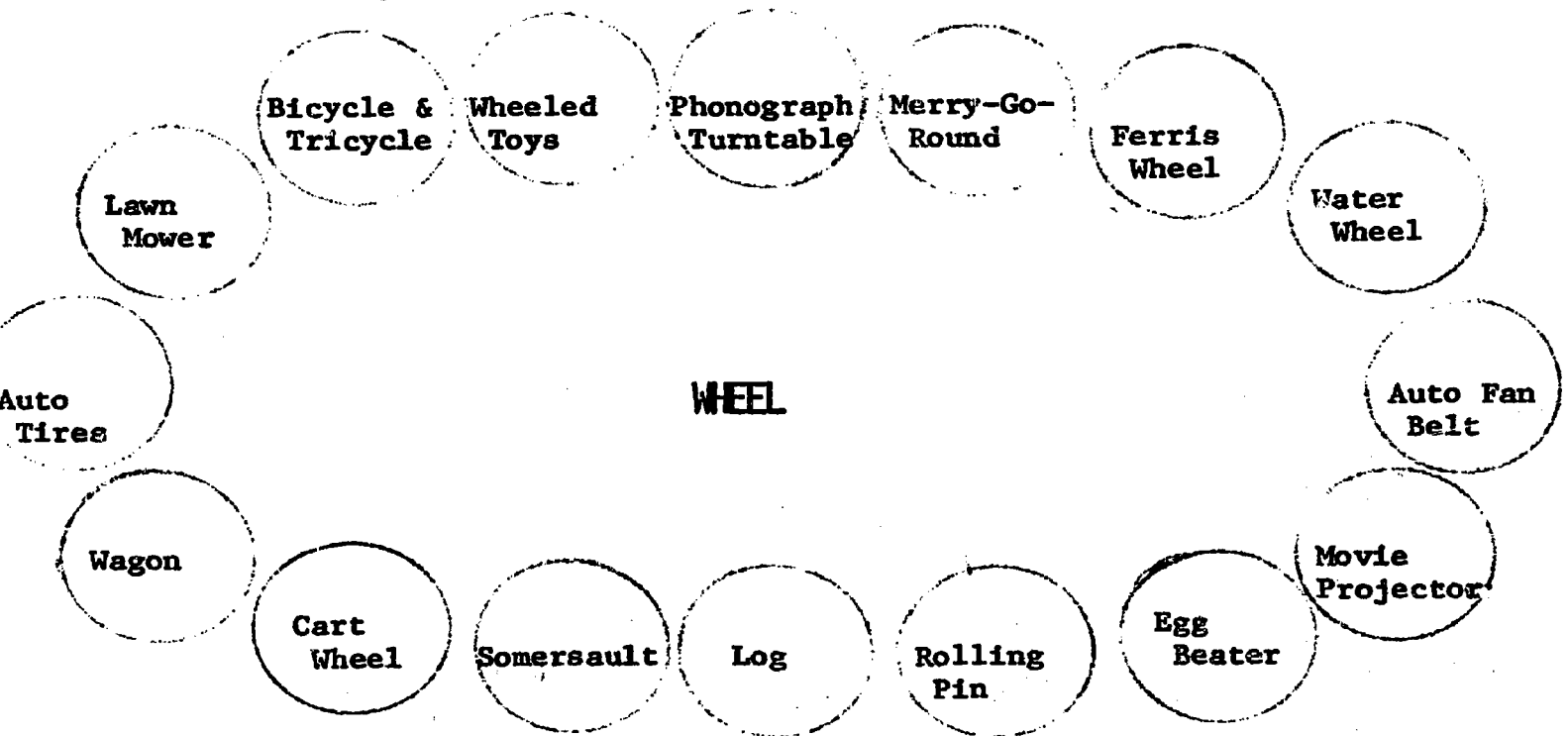
Now it should be possible to see how selection of content from the disciplines finds a place in the nursery school and kindergarten. The structure that provides cohesion within a discipline is composed of key concepts and generalizations. Knowledge of these concepts and generalizations enables teachers to choose the content of programs for young children. Concepts may be met for the first time

through topics directly related to their experiences. For example, understanding of the concept of "role" may be grasped by the youngster who realizes for the first time that he serves in the roles of son, grandson, brother, nephew and cousin, and that he behaves differently in each role. Some concepts must be taught directly or in a carefully guided manner; others may be discovered when children investigate selected materials in their own way.

No attempt is made to divide children's programs into subjects or disciplines; there is conscious effort to guide them into the understanding of concepts that may be extended indefinitely. Herein lies the meaning of the statement, "Curriculum for young children should be concerned with long-term conceptual goals."<sup>3</sup>

Examples of several concept clusters follow which might be used as the nucleus of learning episodes of short duration in the nursery school and of topics which might be explored for several days in the kindergarten.

From the concept wheel, a cluster of related ideas emerge.



<sup>3</sup>Kenneth D. Wann, "A Program for Today's Kindergarten, "Kindergarten Education Washington, D. C.: Kindergarten Education, Department of Elementary-Kindergarten-Nursery Education, 1968, pp. 22-31.

Two and three-year-olds push small wheeled toys along the floor, observe the movement and often talk as they "push and look." The perceptive teacher observes the action and directs the child's inquiry with the right question. A kindergarten child may compare a section of a log, probably man's first wheel, with a wheel from a wagon or tricycle. The teacher again directs inquiry with thought-provoking questions. Many related ideas may be examined through observation of actual objects that have wheels. Through dramatic play in which the teacher has prepared the situation through placing blocks, single wheels, wheeled toys and other materials to be transported, the child may organize and clarify the ideas he has gained from the direct teaching of the concept. Hence, children begin the long journey to full understanding of how man has solved his constant problem of transporting goods and people. Many concepts which form the core of the disciplines could be introduced the same way.

Another concept that can be explored by children at an early age is that of space. Doubtless, very young children organize space around themselves, make territorial claims in line with their wishes, and arrange objects within this claim. Observation of two-year-olds in a sandpile or three-year-olds in a playhouse affirm the idea. At these early stages children may tell "where they are" when a teacher is wise enough to make use of an episode to help children use symbols or language in expressing their relation to space. Kindergarten children may locate themselves in "space" in their classroom and begin to learn meanings of many locational words one must use to tell someone his location in space. A topic designed for use with five and six-year-olds in a directed teaching situation follows:

ORDERING THE SPACE IN WHICH WE LIVE

INQUIRY		CONCEPT	
PROBLEMS	TEACHING PROCESSES	COGNITIVE SKILLS	MATERIALS
1. Where am I?	1. One can describe himself in space in relation to the objects around him. Children may tell or show where they are in the classroom. As children describe their location, note each relational word such as: in, on, upon, behind, beside, up, down, between, over, under, beneath on top of, in front of, near, far, east, west, north, south, .....After children have described their location, suggest the words state above, one at a time, and have each person describe his location using the word. Again, he may <u>show</u> or <u>tell</u> his relationship to other objects in the room. Have children change positions and tell where they are.	Information Input: Describing, identifying, naming	Children and materials in room.
2.a) Which objects in the room are moveable? Immoveable? b) Which objects are the more helpful in telling someone where you are, these that are moveable or immoveable?	2. Children demonstrate objects that may be moved and describe the action (children are moveable objects - <u>wait</u> to see if any child perceives this fact). Demonstrate the immoveable objects.	Information Input: Observing, identifying  Extending Meaning: Classifying, comparing	Children and objects in room.

c) Which objects could you always use to tell someone where you are in the room?

Let children demonstrate by selecting an object and telling their locations.

Observing, discovering a principle

3. How would you tell another person how far you are from the window? from John? from the door?

3. Again, let children demonstrate their ideas. Your objective is not to introduce standard units of measure or "scale," but rather to begin the child's perception of the idea and the necessity for units of measure that all persons can understand. Encourage the use of blocks, chairs, children to describe "how far."

Convergent Problem solving

Children and objects in room.

4.a) What are the directions that we use in locating things in space?

b) Why do we need the names of directions to help us locate things in space?

4. Have children walk toward the north, south, east & west. Locate the center of the room. Locate objects that are always north of the center, south? east? west? Have children describe the distance from north to south? The east to west wall? Use masking tape and make a line from the east to the west; from north to south; let the children tell where the line is located or show its location.

Information Input: Locating, observing, identifying, describing

Masking tape to use in making lines across length and width of room.

5. How do the north-south and east-west lines help us to tell where we are?

5. Let children demonstrate and tell where they are in relation to the lines. Have a child stand at the intersection of the two lines and tell where he is. Why are the immovable lines helpful?

Extending Meaning: Comparing, verifying, establishing connections

PROBLEMS	TEACHING PROCESSES	COGNITIVE SKILLS	MATERIALS
6. How could we show where we are in the room?	6. Let children suggest how to represent where they are on the classroom floor - blocks with names, name tags, marks with chalk, dolls, etc. let each person mark his location with a symbol. Do the same for all large furniture. Ask children to move to one side of the room and tell where their "symbols" for themselves are in relation to something or somebody; in relation to the lines on the floor? Ask: What have we made? Have you seen "signs" or symbols that tell where objects or people are?	Convergent-divergent Problem Solving.	Materials for labeling locations. Wall map to place on floor
7. Children can begin their understanding of man and his space relationships through exploring this question: Why are <u>these</u> objects in <u>this</u> room? - teacher's chair, tables, easels, etc? Children? Which of the objects are man-made? which are natural?	7. The objects which people put into their living space are chosen because of the values these persons hold and the ways they express them. Thus, ask children why there are pictures in the rooms, for example. Continue with other objects. Help children to see the relationships between natural and man-made objects.	Convergent Problem solving	



To state that the development of concepts and the language needed to describe them is one of the most important aspects of a young child's growth seems trite indeed. Yet, observance of children's programs assure us that the fact has not become firmly established in practice. From concrete experiences the child gets the meanings for the words which will enable him to organize his world symbolically. Here, it might be pertinent to suggest that too often, much of the young child's time in school is spent in dealing with symbols for which he has no meanings; symbols that have no way of becoming a part of his intellectual growth. In a most explicit manner, Barbara Biber has described the stages in which a child organizes understanding:

There are important stages during which a child organizes his understanding, his ideas, and the meaning of things and relations in the world in which he lives. Objects are not only objects to do things with, they also have names. They are not just ornaments in our universe, they have uses and functions. They not only have functions, they have shapes and colors and size. Objects are related to each other; certain things belong together. Objects and events may be classified and grouped in many ways. The child realizes that certain things, even people, can be both the same and different at the same time: a father is a husband. Not only are objects grouped and classified, but events have an order, a place in time. The arrangement of experience on a timeline begins to be understood during this period, and so does the important concept that things change from being one thing to another.

This is a brief and quick way of talking about the complex process of developing conceptual order in the world of things. Perhaps what is most important for us to realize on the educational front is that the child may be helped to gain mastery in the world of ideas and concepts depends upon being helped to a skillful and rich use of words and language forms, so that<sup>4</sup> he can deal with ideas skillfully through the verbal system.

Because we believe there are many ways through which children bring order in their conceptual world, we would not want to overlook the many visits to places and

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<sup>4</sup>Address by Barbara Biber, "Young Deprived Children and Their Educational Needs".

with people that are a part of an enriched curriculum.

Piaget discusses development that is nourished by a wide variety of environmental nutrients--many of which we do not understand. He regards thought and language as different although closely related. As an illustration he cited examples of inner-city children who seemed retarded in language, but who reached the level of concrete operations--that is, the "ability to do things in their heads" where here-to-fore, they could only accomplish them through real actions...at the approximate age as the other children. Because we do not know how all children learn to think, particularly when we know that many learn to think merely by growing up, we have much hesitation about suggesting the "best" or only ways to teach any child.<sup>5</sup>

The sensory intake from these trips into the concrete world often are reorganized and clarified through painting, movement, dramatic play, building with wood or sculpting in clay. A feasible assumption might be that the child who has put his ideas into paint, wood or clay is more nearly ready to express it in words. To say the least, "the child's intellectual development has had a chance to move from enactive through iconic to symbolic representation of the world."<sup>6</sup> A rather common observation by those with insight into children's programs is that the quality of living in the classroom is reflected in their creative products.

Through an introduction to the concept of market, young children may begin to grasp meanings from the complex world of economics. Going to market, buying and selling, have been a part of many children's experiences from a very early age. Observation of dramatic play often reveals interpretation of activities associated

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<sup>5</sup>Elkind, David, "Giant in the Nursery", Jean Piaget. The New York Times Magazine, May 26, 1968, p. 38.

<sup>6</sup>Bruner, Jerome S., Toward a Theory of Instruction. N.Y.: W. W. Norton and Co., 1968, p. 49.

with marketing. The topic that follows was written for five-year-olds, but parts of it could be used as "learning encounters" with younger children.

A ROADSIDE MARKET

INQUIRY		CONCEPT	
PROBLEMS	TEACHING PROCESSES	COGNITIVE SKILLS	MATERIALS
1. What kind of market is this?	1. Visit small roadside market. Discuss kinds of things that are for sale. Make list of items. Teacher may make slides or colored pictures to be used in later classroom discussion.	Information Input and Memory	Small roadside market of flowers, fruits, vegetables.
2. Where did the flowers, fruits, etc., come from?	2. Discussion with market owner or from list made on visit. (Set of Pictures).	Deriving Meaning	Actual materials found in market or discussion from list made at time of visit.
3. Who produced the things in the market?	3. Let children discuss or speculate about how things were produced. Discuss the <u>labor</u> involved in the production.	Deriving Meaning	Use movie of farm or pictures--filmstrips that are appropriate. Slide of market of products.
4. How do the things (goods) get to the market?	4. Let children surmise about how things got to the market. Test ideas through discussion with the owner.	Convergent Problem solving	Visit to market; Pictures, books, films, etc.
5. What was the producer paid for his products?	5. Discuss wholesale cost of various articles with market owner. Compare with prices that customers are required to pay. Introduce the concept of profit--should the	Convergent Problem solving	Articles from market showing retail and wholesale price.

PROBLEMS	TEACHING PROCESSES	COGNITIVE SKILLS	MATERIALS
	market owner get a profit? Compare the labor of the producer and distributor, the merchant.		
6. When you bought an apple and gave the merchant money, what were you doing?	5. Let children simulate "trading" as they had done it in the market. Focus on act of <u>buying, selling, paying, etc.</u> Refer again to the idea of <u>profit</u> .	Deriving Meaning	Money, articles like those in the market. Children buy in market.
7. If there were no market, how would your family get vegetables?	7. Discussion - imaginative problem solving. Some children may draw pictures.	Divergent Production	
8. What is a market? What are other markets that you have seen or may visit?	8. Through discussion, children may describe a market or make generalizations about them. May want to paint markets.	Deriving Meaning	
9. What would happen to the market if no one stopped to buy the goods?	9. Through discussion children may begin to see how customers control markets.	Divergent Production	

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M2659          Truck Farmer, i.

M2660          Production of Food, i.

Possibly no environment is a dull place for children to grow up, the adults who guide them may lack the imagination to grasp the opportunities which the environment affords. For example, by looking around almost any neighborhood one may become aware of concrete materials and ideas which serve as the stuff from which learning comes. Through topics similar to the ones listed below, children can be introduced to many important concepts about their world and the disciplines that seek to interpret it.

bridges	side walks	trees	lakes	bricks	lumber	tools
language	old houses	roads	shoes	plants	plains	grass
families	new houses	parks	water	clouds	fabrics	soil
gardens	insects	hills	color	rivers	customs	hats
weather	people	birds	tools	people	churches	sounds

The list is endless.

### From Meanings to Oral Language to Reading

Successful readers find their beginnings in the nursery school and kindergarten. The essence of reading is the ability to bring meaning to printed symbols. Children who have acquired meaning for numerous concepts and can talk about them are ready to meet these concepts in reading. From TV and other mass media today's child meets symbols very early in his life. At the age of three or earlier some children become very interested in the shapes and forms of letters and will copy them at every opportunity. In the kindergarten objects are labelled when the meanings and names are known. The teacher supplies the label: a confident youngster puts it on the correct object. Letters, stories and poems are written by the teacher while children dictate. Informational books, including well-known reference books, extend information about concepts when read by the teacher while children listen and look at illustrations.

### Mathematics

Young children have an intrinsic interest in mathematics that may be observed as they explore their environment. Because in mathematics, as in other disciplines, children must deal with symbols, the meanings for mathematics can be grasped only through the child's natural way of learning through physical, active, sensory, and concrete activities.

Just how long children would need to arrive at the meaning of important mathematical concepts on their own is debatable; that they can begin to understand these concepts early under skilled guidance is well-known. What concepts are important

in the structure of mathematics must be a part of the teacher's knowledge if she believes that the education of young children should be based on long-term conceptual goals.

In the structure of mathematics, most scholars would agree that the concept of set is basic to mathematics, and its use continues as long as one works in the field. Because mathematics is one way of bringing order into the world, the concept of set is not too difficult for children if we begin this way. The toys in a child's room may be put into a group or set of blocks, dolls, machines, animals, etc. He soon discovers that all of these articles are toys as well as dolls, dishes, animals, etc. There are sets everywhere: sets of furniture, sets of books, sets of beads and so on. The concept is met in simple ways at first, but the teacher carefully prepares movement into more complex understanding of the idea. The mathematical concepts children can experience in early years have been defined; the teaching of them is carefully analyzed and described in unpublished works by Castaneda.<sup>7</sup>

#### THE ROLE OF THE HUMANITIES

##### IN CHILDREN'S PROGRAMS

#### Literature

Great literature for children abounds and should be introduced to them as soon as they are willing to listen. Fine illustrations carry the story even though the child does not grasp it from the words; therefore, he is a willing listener at an early age, especially if the reading is done by a significant

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<sup>7</sup>Alberta Castaneda, A Proposed Program for Beginning Mathematics Concepts for Kindergarten Children. Unpublished Master's Thesis, The University of Texas at Austin, 1965; The Differential Effectiveness of Two First Grade Mathematics Programs for Disadvantaged Mexican-American Children. Unpublished Doctoral Dissertation, The University of Texas at Austin, 1967.

person. In nursery school and kindergarten the reading of a fine book by the teacher should be a part of every day's program; a table with books, changed often, for browsing, should be ready for individual readers. The child who chooses often to sit and look through books is probably the youngster who will easily and early move into reading on his own.

Probably no greater contribution to reading can be made in the early years than to create within children a genuine love of books. Through the great themes, memorable characters, beautiful illustrations and splendid language found in children's literature, a dimension of living is opened which can be a source of information, inspiration and delight throughout a lifetime. Great literature for children is also great literature for adults. A part of the education of every teacher of the very young should be a thorough acquaintance with the field, to the extent that she knows the difference between books that are pedantic and mundane and those that are universal in spirit.

### Music

Because we feel that persons who understand and appreciate music possess an extreme dimension in their lives, we wish that there were ways to assure effective music programs for children of all ages. To introduce young children to the elements of music: rhythm, melody and harmony, through compositions in which a composer has used his magic to produce a work of art may be the correct beginning to musical understanding.<sup>8</sup> It is through movement to such music that children probably begin their understanding of it. A reasonable assumption is that the only intellectual response a young child can make to music is an enactive one--in other words, he acts upon it. Observations over a period of ten years or more, revealed

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<sup>8</sup>Marianne Hyde, Aesthetic Education in the Elementary School. Music Educators Journal, April, 1968, Vol. 54, No. 8, p. 117; Southwestern Musician, May, 1968, p. 6.



children who had been introduced to great music in the kindergarten through movement were requesting the same compositions in the sixth grade. Therefore, it appears that listening and moving to music should find a prominent place in early education. Young children also love to sing--not only the "small songs for small children," but the earthy folk songs that have been sung in many parts of the world. Experimentation with instruments may allow the rare young composer to work his own magic with rhythm, melody and harmony. Hearing live performances by individuals and groups is often possible if their value is recognized. If taught by persons who understand and appreciate music, children, too, may become increasingly aware that it was "created for our perception through sense and imagination, and expresses human feeling."<sup>9</sup> Maybe it is through music that the whole world is kin, a thought that, somehow enhances its importance in the education of handicapped children. Responsibilities of the teacher lie in the ability to select appropriate materials--records, songs, instruments--and to provide skilled guidance in their use.

### Movement

Support for the importance of sensory-motor experience in learning has continued to find a place in research for many years. A common observation of those who teach young children is that of the child who can show the meaning of an idea with his body but is unable to state it in words. Probably the same response could be observed in children throughout the elementary school if teachers valued this type of communication in the same way that they value verbal responses. Recent work with brain-damaged children indicates the importance of the body as the frame of reference from which perceptual judgments are made.<sup>10</sup> Piaget, in his

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<sup>9</sup>Rader, Melvin, A Modern Book of Esthetics. New York: Holt, Rinehart and Winston, 1960, p. 249.

<sup>10</sup>Piaget, Jean, The Construction of Reality in the Child. New York: Basic Books, Inc., 1954, pp. 357-364.

theory of sensory-motor development, points out that children from two to seven years of age often revert to the earlier sensory-motor behavior when faced with a new and difficult situation.<sup>11</sup> It is possible for young children to begin the expression of ideas with their bodies as well as through paint, clay, or wood, and for older children to grow into more sophisticated levels of expression through creative dance. For some exceptional children, bodily movement may be their only effective means of communication.

Through the humanities children not only organize their own thoughts and feelings about experiences; their conceptions of reality are shaped through the creative expressions of others. Consider, for example, the effect of John Marin's paintings of the sea on your own feelings and thoughts about it. Is it not possible that Marin's creative statements have fashioned your concepts as much as your own personal views of the ocean itself? Thus, we can begin to see the importance of the humanities as a source of content as well as a means of expression, in programs for nursery and kindergarten children.

The study that follows, We Live With the Wind, is an example of the use of poetry as content for kindergarten. The poets have always served in the vanguard of the scientists; therefore, it must be logical for children to study the wind through voices of the poets.

#### We Live With the Wind

The design for this study was unique. An aesthetic approach, rather than a scientific study of wind and weather, was used in an experimental way to evaluate children's responses to this way of learning. Children were encouraged to "live" with the wind: to feel it, hear it, move with it. Music, art, and literature were

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<sup>11</sup> Porter, Lorena, Movement Education for Children. Washington, D.C.: American Association of Elementary-Kindergarten-Nursery Educators, 1969, pp. 10-11.

used extensively. Children were free to respond through rhythms, paintings, original poems, and other forms of aesthetic expression.

### I. Content

The activities suggested for this study are an integral part of the content. Children's responses to the real and vicarious experiences of living with the wind are important to the study and its evaluation. Questions which will probably be included are listed below.

- A. What is wind? Can you see the wind. How can you tell when the wind is blowing?
- B. Does wind blow all of the time? Does it always blow with the same force? What is a hurricane? Why are some winds cold and others warm?
- C. How is wind used to sail boats? To pump water? To tell wind direction? To fly kites? Other ways?
- D. What have poets said about the wind? What are some things they have compared with the wind. What kinds of winds have they written about?
- E. How do you feel about the wind?

### II. Related Generalizations

- A. We live with the wind. We can feel it, hear it, and see the things it moves.
- B. Wind blows in many forces, from soft gentle winds to angry winds of gale and hurricane force.
- C. We often use the force of the wind for work and play activities.
- D. Men express their feelings about the wind in stories and poems.

### III. Activities

- A. Read a story, Who Has Seen the Wind?, and the poem by the same title. Talk about the nature of the wind. Let children tell of experiences with the wind.
- B. Take a walk in a windy day. Discuss evidence that the wind is blowing.
- C. See a film, Life and Times of a Balloon. Talk about the force that moved the balloon. Release several balloons and see what the wind does to them.

- D. Read "The Wind-Wolves," "Wind is a Cat," and "Windy Night." Discuss poets' feelings for the wind, and what they compared with the wind.
- E. See a movie about a sandstorm: Ali and His Baby Camel. Talk about what wind can do to the soil.
- F. Look at pictures of damage done by tornadoes and hurricanes.
- G. Tie crepe paper streamers on outdoor equipment to observe the force and direction of the wind.
- H. Hang wind chimes near an open window in the room and enjoy the tinkling as the wind moves through them.
- I. Use activity record, "My Playmate, the Wind."
- J. Rhythmic interpretation to music. Pretend to be the wind. Then pretend that the wind is moving you. You might be a tree, a leaf, a cloud, a kite, a dress hanging on the line, a balloon, a boy or girl.
- K. Read poetry to the children, and let them make pictures to illustrate the poet's ideas about the wind.
- L. Let children paint a picture and tell their own story about the wind.

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Nolan, Bob, "Wind," "Tumbling Tumbleweeds," Favorite Cowboy Songs. Sons of the Pioneers. RCA Victor, LPM 1130, 33 rpm.

My Playmate, the Wind. Young People's Record, 2-4501-B. 45rpm.

#### SUMMARY OF THE ROLE OF THE DISCIPLINES IN EARLY CHILDHOOD PROGRAMS

If we accept the premise that all of life is a search for its meaning, then the fact that a child enters the search early becomes very evident. From birth until near the age of two his method consists of moving, touching, looking, listening, tasting. The beginnings of symbolizations begin to appear through sounds, babbles, words and scribbles. If we want to seem very erudite, we say that children begin to explore the physical and cultural world very early and try to clarify, organize, and possibly communicate their findings through the visual arts, movement, dramatic play, sculpture, music and language. To be more honest in terms of our limited knowledge, we say that children are engaged in the same search in which scholars in the social sciences, the physical sciences, mathematics and the humanities are engaged. They are trying to make sense of the world using similar means, each at his own entrance point. Hence, we begin to understand why the direct teaching of concepts that scholars have found provocative throughout the years may assist the child in his ordering of experience--his numbers of trials and errors may be fewer.

Through the arts--painting, sculpture, dance, drama, music and literature, teachers see children grow in self-acceptance, a willingness to trust their own ideas, however faulty they may seem to adults. For the perceptive teacher, the revealed misconceptions furnish the cues for her next steps in intervention--a bit of dissonance that spurs the learner in continuing the search.

In an attempt to help teachers understand how to implement basic concepts in

the programs of five-year-old Mexican-American children, the Research and Development Center for Teacher Education at The University of Texas produced video-tapes of five skilled teachers working with the same group of children in mathematics, science, social studies, art and music. A thirty minute tape was made in each area. Both the "intake and output" of experience becomes visible in these tapes. These will be used as laboratory materials for pre-service and in-service teachers.

### THE ROLE OF MANIPULATIVE MATERIALS

That manipulative materials have a place in early education is unquestioned; however, many questions based upon knowledge of young children can be raised about uses made of these materials and claims made by producers concerning their value. Children do need objects to "touch, feel, order and compare," but very early in their lives objects are used to recreate concrete experience. So the question arises, "Are we as much concerned in early education about concrete experiences to remake as we are about the materials to remake them?" First, many of the materials are symbols themselves which can be understood only if meanings are first brought to them. Secondly, observation reveals that children often manipulate things alone. Desirable, yes, but there is also the need for a teacher who can extend the child's experience through stimulating questioning at the right time. Even play that children initiate on their own with materials can be stimulated through proper guidance by the teacher. Maybe the issue before us is concerned with the relationships between the experiences that children have with the real world and the objects they use to extend and clarify their thinking about it. Explicitly, the materials found in classrooms reveal the teacher's real knowledge about children. Silent children, surrounded by all conceivable kinds of manipulative materials, often need direction.

## PLANNING EDUCATION PROGRAMS FOR THE HANDICAPPED

The intent of this monograph was to focus upon trends in educational programs for young children who present normal learning behavior. Among this group one finds many and varied differences for which adjustments must be made. Some of the ideas presented here represent good theory only--theory that works in particular school settings. Unanswered questions arise at every turn and our hope is that keener minds using better research methods and tools will bring about more effective ways to educate normal youngsters. On the basis of what our experience has taught us, we believe that teachers of the handicapped will assist in the search for effective programs when better solutions to the following problems are found:

1. Comparisons of the growth and learning of handicapped children with normal ones when using the same educational materials.
2. Analyze curricular materials in terms of the differences found in exceptional children and set forth the kinds of modifications that must be made in learning activities and materials.
3. Create and design materials for handicapped children which will enable them to participate more effectively in all aspects of programs for normal children.
4. Educate teachers for exceptional children in ways that enable them to analyze the abilities of particular handicapped persons and plan programs that are developmental in all aspects of a regular curriculum. More explicitly, what should the next step in mathematics be for John, a handicapped kindergartener? Similar questions should be asked about all phases of the program.
5. What kinds of organizations seem to serve the needs of these children best? Individuals working alone with a teacher? Small groups? Large groups for particular activities?
6. Educate teachers in ways that will enable them to understand and design effective educational programs for normal children. From this understanding, adaptations can be made for all children.



7. What parts of the educational program can be done best by parents and how can they be trained for the task?

At this moment, regular programs, with their imperfections, are all the measures we have for planning better programs for the handicapped. Ronnie Gordon, Director of the Preschool Developmental Programs at the Institute of Rehabilitation Medicine of New York University Medical Center, discussed this need in teacher education in a very succinct manner.

In order to recognize uncommon learning and behavior, the teacher must be familiar with normal learning and behavior. After many years of experience, in an educative and evaluative role with this very diversified population of children between the ages of two and six, with their concomitant problems of physical, behavioral and/or mental deviation, it is our firm belief that the personnel responsible for preschool developmental programs must be more than just "familiar" with normal children. They must have had a long internship in both theoretical and practical work with a normal early childhood population before assuming the deep responsibility for evaluating and educating handicapped children.<sup>12</sup>

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## V I T A

### Clyde I. Martin

Dr. Clyde I. Martin is Professor of Education at The University of Texas at Austin. Her work in Early Childhood Education has been varied and extensive. She designed and assisted in the development of the program for five-year-olds at Casis Elementary School which was for many years the center for graduate research with children. In this program there were both normal and exceptional children.

Dr. Martin's professional writing included books, monographs and articles concerning the education of children and teachers. She has provided leadership in the development of curriculum for young children in many parts of the nation. In 1960 she served as research consultant in teacher education in Brazil, S. A. During the Summer, 1969, she participated in a study group to England where she worked in the enfant schools and the universities.